



Establishing Waste Reduction Schedules in Solid Waste Management Plans

Technical Guidance Document SW 06-01

Solid waste planning for counties is described in state law in K.S.A. 65-3405 and in regulations K.A.R. 28-29-75 through -82. Solid waste management (SWM) plans are intended to be detailed guides for present and future solid waste systems for a county, region of counties, or designated city. K.S.A. 65-3405(j)(9) requires the SWM plan to include a schedule for the reduction of waste volumes considering source reduction, reuse, recycling, composting, and land disposal.

Process

In order to meet the minimum requirements for SWM plans, the waste reduction schedule must contain one or more strategies to achieve a reduced waste disposal rate along with a schedule for implementing and evaluating these strategies. For planning regions, it may be appropriate for waste reduction schedules to be developed on a county-by-county basis to account for varying strategies used within the region.

Recycling or waste diversion has proven difficult to measure with wide variation in reporting and methods used. It is highly recommended that solid waste planners utilize municipal solid waste disposal per person per day as the basis for measuring waste reduction. Statewide, this rate has remained fairly constant for the past three years at 5.8 pounds per person per day. Reduction of construction and demolition, industrial, and other waste is also encouraged; however waste reduction schedules need only include municipal (residential and commercial) solid waste.

For counties utilizing a single disposal facility for the entire population, annual municipal solid waste (MSW) tonnage figures available from the Bureau of Waste Management can be converted to pounds (multiply by 2,000) and days (divide by 365) then divided by the total population to arrive at a benchmark disposal rate. The effectiveness of waste reduction strategies can be evaluated by tracking trends in the disposal rate.

When counties have multiple waste disposal paths, such as private companies that directly haul waste out of the county or a landfill that receives waste from multiple counties, a direct calculation is more complex. In these cases, counties should assemble all the available information from public and private sources. In some cases, this may not represent the entire waste stream if some parties are unwilling to share disposal information.

For complex waste management systems, counties should “measure what you can” and estimate the portion of the county population served by the measurable portion of waste disposal to calculate a benchmark rate. While not precise, consistent tracking of disposal trends by this method should give a good indication of the effectiveness of waste reduction strategies. If additional waste quantity information becomes available over time, the portion of the population served should be adjusted relative to the added waste flow.

County A

Annual MSW disposed	26,689.12 tons
Per day	$\div 365 = 73.12$ tons/day
Convert to pounds x 2,000	= 146,241.75 lbs/day
Population	$\div 29,523$
4.95 pounds per person per day disposal rate	

County B

Annual MSW directly hauled	not available
Annual MSW transfer station	88,078.9 tons
Per day	$\div 365 = 241.3$ tons/day
Convert to pounds x 2,000	= 482,624.11 lbs/day
(Population: 111,334; 75% of population served)	
Population served	$\div 83,500.5$
5.78 pounds per person per day disposal rate	

Strategies

Wide variations in demographics and economic activity within Kansas require different approaches to waste reduction. For several years, the Bureau of Waste Management has offered competitive grants to encourage the creation or expansion of waste reduction programs and facilities. The following list includes a number of strategies that have been employed across Kansas.

This list does not include every possible approach to waste reduction and planners are encouraged to be creative in designing strategies to fit the local population and conditions.

- Increase public education on recycling, reuse, and source reduction
- Implement a single-site drop-off recycling program
- Upgrade from single site to multiple site, or mobile trailer collection of recyclables
- Implement multi-stream curbside recycling
- Implement single- or double-stream curbside recycling
- Initiate commercial, industrial, and institutional recycling initiatives, including waste analysis
- Promote home composting of yard waste and organics
- Initiate curbside collection of yard waste for central composting
- Ban yard waste from collection and disposal
- Implement pay-as-you-throw/unit-based pricing
- Implement full cost accounting to assess waste disposal costs and encourage reduction
- Analyze waste streams to target additional diversion (e-waste, C&D)
- Ban recyclables from collected waste

- Initiate recycling for multi-family complexes
- Develop reuse programs for household furnishings and building materials
- Actively promote the establishment of businesses that utilize recyclables as raw material

Schedule

K.S.A. 65-3405(j)(1) establishes that solid waste plans cover a ten-year period and waste reduction schedules must extend through the entire planning period. At a minimum, waste reduction should be measured and evaluated with each required five-year update of the SWM plan. More frequent examination of waste reduction is encouraged through the annual review process. The schedule should indicate target implementation dates for waste reduction strategies and decision points to evaluate their effectiveness.

Goal Setting

Solid waste planners are highly encouraged to set measurable goals as part of their waste reduction schedule. Statewide, KDHE has set a target of reducing waste disposed in landfills by 1% per year. Flexibility exists to describe goals in terms of overall reduction or for specific waste streams or populations.

Assistance

Technical support for solid waste planning is available from the Bureau of Waste Management. Information on landfill and transfer station disposal quantities can be provided along with assistance in calculating local disposal rates. In addition, onsite meetings with solid waste planners and/or committees can be arranged. For questions regarding solid waste reduction schedules or SWM plans in general, please contact Marty Burke at (785) 296-6724, <mburke@kdhe.state.ks.us>, or Dennis Degner, (785) 296-1601, <ddegner@kdhe.state.ks.us>.

For additional information regarding proper management of any wastes, you may contact the Bureau of Waste Management at (785) 296-1600 or the address at the top of this document, or visit the Bureau's website at www.kdheks.gov/waste.